	Application No.	Applicant(s)
Notice of Allowability	10/600,857	KONG ET AL.
	Examiner	Art Unit
	Binh C. Tat	2825
The MAILING DATE of this communication apperature All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIOF of the Office or upon petition by the applicant. See 37 CFR 1.313	ears on the cover sheet with the co (OR REMAINS) CLOSED in this app or other appropriate communication IGHTS. This application is subject to	orrespondence address olication. If not included will be mailed in due course. THIS
1. This communication is responsive to <u>09/20/04</u> .		
2. The allowed claim(s) is/are <u>1-5,8-18 and 21-29</u> .		
3. $\boxtimes$ The drawings filed on <u>19 June 2003</u> are accepted by the E	xaminer.	
<ul> <li>4. ☐ Acknowledgment is made of a claim for foreign priority ur</li> <li>a) ☐ All b) ☐ Some* c) ☐ None of the:</li> <li>1. ☐ Certified copies of the priority documents have</li> <li>2. ☐ Certified copies of the priority documents have</li> <li>3. ☐ Copies of the certified copies of the priority documents have</li> <li>International Bureau (PCT Rule 17.2(a)).</li> <li>* Certified copies not received:</li> </ul>	be been received. been received in Application No	
Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONM THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		complying with the requirements
5. A SUBSTITUTE OATH OR DECLARATION must be subm INFORMAL PATENT APPLICATION (PTO-152) which give		
<ol> <li>CORRECTED DRAWINGS ( as "replacement sheets") must</li> <li>(a)  including changes required by the Notice of Draftspers</li> <li>1)  hereto or 2)  to Paper No./Mail Date</li> <li>(b)  including changes required by the attached Examiner's Paper No./Mail Date</li> <li>Identifying indicia such as the application number (see 37 CFR 1) each sheet. Replacement sheet(s) should be labeled as such in the</li> </ol>	on's Patent Drawing Review (PTO-6 . s Amendment / Comment or in the O .84(c)) should be written on the drawir	ffice action of
<ol> <li>DEPOSIT OF and/or INFORMATION about the deposit attached Examiner's comment regarding REQUIREMENT</li> </ol>		
Attachment(s)  1. ☐ Notice of References Cited (PTO-892)  2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)	6. ☑ Interview Summary Paper No./Mail Dat	
<ol> <li>Information Disclosure Statements (PTO-1449 or PTO/SB/0 Paper No./Mail Date</li> </ol>	8), 7. ⊠ Examiner's Amendn	nent/Comment
4. ☐ Examiner's Comment Regarding Requirement for Deposit	8.   Examiner's Stateme	nt of Reasons for Allowance
of Biological Material	9. Other	-,
	VUTH PRIMARY	U SW- E SIEK EXAMINER

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## **DETAILED ACTION**

## **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kim Kanzaki on 09/27/04.

The application has been amended as follow:

Claim 28 line 10 delete "using" insert --being ratio of--.

Claims 30-43 have been canceled.

## Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-29 drawn to routing, classified in class 716, subclass 12.
- II. Claims 30-43 drawn to detailed routing, classified in class 716, subclass 14.

Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the routing in group I does not need the design detail routing in group II and the design detail routing in group II can be used in other applications.

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Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

an

During a telephone conversation with Kim Kanzaki on 09/27/04 a-provisional election

was made without traverse to prosecute the invention of group I, claims 1-29. daims 30-43 have

been canceled as non-elected. daims.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

- 1. Claims 1-5, 8-18, and 21-29 are allowed because the prior art does not teach or suggest a method for calculating a future cost for use in routing an integrated circuit, the conductors in the integrated circuit being modeled by a plurality of nodes and at least one source node, the method comprising: obtaining a first node from the plurality of nodes; obtaining a second node that can be electrically connected to the first node; determining a cumulative routing cost of the second node; calculating a first distance between the second node and the source node, wherein first distance is less than a predetermined value; and setting the future cost equal to the cumulative routing cost if there is no existing future cost that corresponds to the distance or if the cumulative routing cost is less than the existing future cost corresponding to the distance; and calculating a first cost slope as a function of the cumulative routing cost divided by the first distance and recording the first cost slope in a memory location for use as a future cost value associated with a first predetermined maximum distance.
- 2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

## Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh Tat whose telephone number is (703) 305-4855. The examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

4. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Tat Binh

Patent Examiner

September 29, 2004

VUTHE SIEK PRIMARY EXAMINER